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Takuji Maeda

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EXAMINER

YAARY, MICHAEL D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/685,539	Applicant(s) MAEDA ET AL.	
	Examiner MICHAEL YAARY	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-12, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 3-12, 16, and 17 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-5, 10, 11, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard (US Pub 2002/0078244) in view of Nakashima et al. (hereafter Nakashima)(US Pat. 5,930,825) and in view of Otsuka (US Pat. 6,243,796).

4. Howard and Nakashima were cited in the previous office action dated 12/10/2007.

5. **As to claims 3, 16 and 17**, Howard discloses a file-update apparatus, which is able to mount a removable first recording medium and execute a plurality of update procedures to update a file on the first recording medium ([0029], lines 3-10 and [0006], lines 6-10), said file-update apparatus comprising:

A progress recording unit operable to record, onto said second recording medium, progress information showing which of the update procedures have been executed in updating the file ([0057], lines 1-8 disclose the process including detecting when an update to a file occurs, thus indicating the progress information of the procedures executed.);

A new-data recording unit operable to record, onto the first recording medium, data constituting a content of the file after updating the file, in a different storage location from the data constituting the content of the file before updating the file ([0057], lines 1-3);

An update information recording unit operable to record, onto the second recording medium, update information showing the storage location, on the first recording medium, of the data constituting the content of the file after updating the file ([0071], lines 1-3);

An updating unit operable, after the update information has been recorded onto said second recording medium, and if no interruption of the update procedures has taken place, to update the location information on the first recording medium based on the update information, so as to show the storage location of the data constituting the content of the file after updating the file ([0071], lines 3-5);

A recovery unit operable, if an interruption of the procedures has taken place, and if a predetermined condition is satisfied, to determine which of the plurality of update procedures has been executed based on the progress information, and on a basis of the determination, to update the location information on the first recording

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medium so as to show the storage location of the data constituting one of the content of the file after updating the file or the content of the file before updating ([0057], lines 3-8 and [0071], lines 1-3).

6. Howard does not disclose an ID recording unit operable, before the updating of the file, to read unique medium identifier information from one specific position the first recording medium, and to hold the medium identifier information; and a recovery suppressing unit operable, if the interruption of the update procedures has taken place and the predetermined condition is satisfied, and before said recovery unit updates the location information, to read medium identifier information from a same position as the specific position in a removable recording medium mounted in said file-update apparatus, compare the read medium identifier information with the held medium identifier information, and suppress the updating of the location information by said recovery unit if the read medium identifier information does not match the held medium identifier information.

However, Nakashima discloses an ID recording unit operable, before the updating of the file, to read unique medium identifier information from one specific position the first recording medium, and to hold the medium identifier information; and a recovery suppressing unit operable, if the interruption of the update procedures has taken place and the predetermined condition is satisfied, and before said recovery unit updates the location information, to read medium identifier information from a same position as the specific position in a removable recording medium mounted in said file-

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update apparatus, compare the read medium identifier information with the held medium identifier information, and suppress the updating of the location information by said recovery unit if the read medium identifier information does not match the held medium identifier information (Abstract lines 1-8; column 4, lines 1-36; and column 7, lines 28-47 disclose preventing unauthorized access by comparing an original stored medium ID to the current medium ID; thus not allowing access to software or data if the IDs do not match.)

7. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Howard, by incorporating an authorization feature as in storing and comparing medium IDs, as taught by Nakashima, for the benefit of preventing unauthorized users to gain illegal access to software files and data.

8. The combination of Howard and Nakashima do not disclose that the medium identifier information is held within said file-update apparatus and that it is the comparison is done between the read medium identifier and a held medium identifier in the file-update apparatus.

However, Otsuka discloses that the medium identifier information is held within said file-update apparatus and that it is the comparison is done between the read medium identifier and a held medium identifier in the file-update apparatus (Abstract; column 2, lines 10-22; and column 14, lines 27-40 disclose a recording medium holding ID information and the apparatus containing ID information; upon a pre-determined

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condition then comparing the two IDs, stored separately, for a match. If the relationship is correct a certain function is allowed to be performed and if not correct the function is disabled. Thus, the comparison of separately stored ID information can be utilized in the updating system of Howard and Nakashima.).

9. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Howard and Nakashima by implementing a comparison of IDs stored in the recording medium and in the apparatus, as taught by Otsuka, for the benefit of creating stronger prevention against unauthorized medium access.

10. **As to claim 4**, the combination of Howard, Nakashima, and Otsuka disclose the location information shows storage locations of data constituting contents of all files on the first recording medium (Inherent in Howard [0057], lines 1-9 as the location information would be applied to all files stored, not only one.),

Said file-update apparatus targets a plurality of the files for updating (Howard, [0060], lines 9-11 disclose multiple files being updated.),

Said progress recording unit records progress information for each targeted file (Howard, [0057], lines 1-9 disclose the process including detecting when an update to a file occurs, thus indicating the progress information of each file of the procedures executed.),

Said new-data recording unit conducts, for each targeted file, the recording, onto the first recording medium, of data constituting a content of the file after updating (Howard, [0057], lines 1-3),

Said update information recording unit conducts the recording of update information, for each file that has undergone data recording by the new-data recording unit (Howard, [0060], lines 9-11),

Said updating unit conducts, for each file for which update information has been recorded, the updating of location information based on the update information of the file (Howard, [0071], lines 1-3), and

Said recovery unit, if an interruption of the update procedures has taken place, and if the predetermined condition is satisfied, conducts the updating of location information for each file, when judged, based on the progress information of the file, that update information relating to the file has been recorded (Howard, [0057], lines 3-9 and [0071], lines 1-3).

11. **As to claim 5**, the combination of Howard, Nakashima, and Otsuka disclose a close instruction receiving unit operable to receive a close instruction relating to individual files that have undergone data recording by said new-data recording unit (Howard, [0051], lines 1-3),

Wherein the progress information includes information for identifying whether a close instruction has been received (Howard, [0051], lines 5-8 disclose checking for error, thus determining if a close instruction was received or not.),

Said updating unit conducts, for each file, the updating of location information, only after update information relating to the file has been recorded and a close instruction relating to the file has been received (Howard, [0006], lines 13-21), and

Said recovery unit if an interruption of the update procedures has taken place, and if the predetermined condition is satisfied, conducts the updating of location information for each file, only when judged, based on the progress information of the file, that update information relating to the file has been recorded and a close instruction relating to the file has been received (Howard, [0006], lines 13-21).

12. **As to claim 10**, the combination of Howard, Nakashima, and Otsuka disclose the location information is formed from (ii) second location information showing storage locations, within the normal area, of data constituting contents of all files in the normal area; the progress information is formed from (ii) second progress information showing, for each file in the normal area, which of the update procedures have been executed in updating the file; said new-data recording unit ii) conducts, for each file in the normal area targeted for updating, the recording, into the normal area, of data constituting a content of the file after updating (Howard, [0057], lines 1-3); the update information is formed from (ii) second update information showing, for each file in the normal area that has undergone data recording by the new-data recording unit, the storage location, within the normal area, of data constituting the post-update file content (Howard, [0071], lines 1-3); said updating unit conducts, (ii) for each file in the normal area for which second update information has been recorded, the updating of second location

information based on the second update information of the file (Howard, [0071], lines 1-3), and

the first recording medium includes an authentication area and a normal area that are mutually independent; a predetermined access restriction applying to only the authentication area of the two areas; the location information is formed from (i) first location information showing storage locations, within the authentication area, of data constituting contents of all files in the authentication area; the progress information is formed from (i) first progress information showing, for each file in the authentication area, which of the update procedures have been executed in updating the file; the new-data recording unit (i) conducts, for each file in the authentication area targeted for updating, the recording, into the authentication area, of data constituting a content of the file after updating, the update information is formed from (i) first update information showing, for each file in the authentication area that has undergone data recording by the new-data recording unit, the storage location, within the authentication area, of data constituting the post-update file content; and the updating unit (i) conducts, for each file in the authentication area for which first update information has been recorded, the updating of first location information based on the first update information of the file. (Nakashima, Column 3, lines 37-58 disclose using a recording medium in which an authorization process is incorporated, thus disallowing unauthorized users access to the content of the recording medium. As a result, this type of area in a recording medium can be integrated with the normal area, not using predetermined access, of a recording

medium in order to perform the same procedures as described above in the normal area.).

13. **As to claim 11**, the combination of Howard, Nakashima, and Otsuka disclose the first recording medium is a flash memory (Howard, [0029], lines 3-5), and said second recording medium is a memory that is accessible faster than the first recording medium (Howard, [0039], lines 3-5).

14. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Nakashima and Otsuka as applied to claim 4 above, and further in view of Applicant Admitted Prior Art (hereafter AAPA).

15. **As to claim 6**, the combination of Howard, Nakashima, and Otsuka do not disclose the first recording medium stores (i) FAT information showing, for each of a plurality of clusters on the first recording medium, whether data constituting any file content is stored in the cluster, and that clusters storing data constituting the content of the same file are linked, and (ii) directory information showing, for each file on the first recording medium, the first cluster storing data constituting the content of the file, the location information is formed from the directory information and all FAT information except for unused-cluster information, said unused cluster being FAT information showing clusters that do not store data constituting any file content, the update

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information relating to each file that has undergone data recording by the new-data recording unit is formed from (i) consecutive-relation information showing that clusters storing data constituting the content of the file after updating are linked, and (ii) entry information showing the first cluster storing data constituting the content of the file after updating the file, said updating unit, for each file for which update information has been recorded, updates (i) the FAT information based on the consecutive-relation information of the file, so as to show that clusters storing data constituting the content of the file after updating are linked, and (ii) directory information relating to the file based on the entry information of the file, so as to show the first cluster storing data constituting the content of the file after updating the file, and said recovery unit updates the location information by updating the FAT information based on the consecutive-relation information and the directory information based on the entry information.

However, AAPA discloses the first recording medium stores (i) FAT information showing, for each of a plurality of clusters on the first recording medium, whether data constituting any file content is stored in the cluster (page 3, lines 6-11; and page 3, line 22 - page 4, line 5), and that clusters storing data constituting the content of the same file are linked (page 4, lines 16-19), and (ii) directory information showing, for each file on the first recording medium, the first cluster storing data constituting the content of the file (page 4, lines 5-8),

The location information is formed from the directory information and all FAT information except for unused-cluster information, the unused-cluster being FAT

information showing clusters that do not store data constituting any file content (page 4, lines 20-23),

The update information relating to each file that has undergone data recording by said new-data recording unit is formed from (i) consecutive-relation information showing that clusters storing data constituting the content of the file after updating are linked (page 5, lines 5-11), and (ii) entry information showing the first cluster storing data constituting the content of the file after updating the file (page 5, lines 18-20),

Said updating unit, for each file for which update information has been recorded, updates (i) the FAT information based on the consecutive-relation information of the file, so as to show that clusters storing data constituting the content of the file after updating are linked (page 5, lines 5-11), and (ii) directory information relating to the file based on the entry information of the file, so as to show the first cluster storing data constituting the content of the file after updating the file (page 5, lines 18-20), and

Said recovery unit updates the location information by updating the FAT information based on the consecutive-relation information and the directory information based on the entry information (page 5, lines 15-17)

16. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the teachings of Howard, Nakashima, and Otsuka by implementing a FAT based system and apparatus for performing file updates as taught by AAPA, for the benefit of maintaining a well-organized, non-complicated system for updating files.

17. **As to claim 7**, the combination of Howard, Nakashima, Otsuka, and AAPA disclose an area-release unit operable, for each file for which update information has been recorded, to record, onto said second recording medium, free-space information showing that clusters which stored data constituting the content of the file before updating do not store data constituting any file content (AAPA, page 5, lines 18-20), wherein

Said updating unit conducts the updating of the FAT information so that the free-space information is reflected in the unused-cluster information (AAPA, page 5, lines 15-17), and

Said recovery unit conducts the updating of the FAT information so that the free-space information is reflected in the unused-cluster information (AAPA, page 5, lines 15-17).

18. **As to claim 8**, the combination of Howard, Nakashima, Otsuka, and AAPA disclose a FAT-information copying unit operable, before the updating of any of the files, to copy the FAT information on the first recording medium into a working FAT area on said second recording medium, as working FAT information (Howard, [0041], lines 1-8 disclose copying from a storage (first recording medium) information such as inodes (analogous to FAT information), to be stored in cache (RAM, second recording medium); a close instruction receiving unit operable to receive a close instruction relating to individual files that have undergone data recording by said new-data

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recording unit (Howard, [0051], lines 1-3 and [0075], lines 1-3); the progress information includes information for identifying whether a close instruction has been received ([0051], lines 5-8 disclose checking for error, thus determining if a close instruction was received or not.); said updating unit updates the FAT information based on the working FAT information (Howard, [0006], lines 10-17 discloses updating an inode based on working inode copy, thus being analogous to updating FAT information.); and said recovery unit, if an interruption of the update procedures has taken place, and if the predetermined condition is satisfied, (i) makes the working FAT information reflect, for each file, consecutive-relation information and free-space information that relate to the file, when judged, based on the progress information of the file, that a close instruction relating to the file has been received, (ii) updates the FAT information based on the working FAT information, and (iii) updates the directory information based on the entry information of each file whose progress information shows that a close instruction has been received (Howard, [0023], lines 13-15; [0041], lines 1-8; and [0052], lines 1-6 disclose the procedures being done in an analogous inode environment), and

said new-data recording unit records data constituting the content of the file after updating the file into clusters not storing data, based on (i) the working FAT information and (ii) the used-area information or the consecutive-relation information (AAPA, page 4, lines 2-3); and the update information recording unit makes the working FAT information reflect (i) the consecutive-relation information of each file for which a close instruction has been received (AAPA, page 5, lines 5-14), and (ii) free-space information

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that shows clusters which stored data constituting the content of the file before updating do not store data constituting any file content (AAPA, page 5, lines 15-17).

19. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Nakashima and Otsuka, as applied to claim 11 above, and further in view of Yoo (US Pub. 2002/0059570).

20. Yoo was cited in the previous office action dated 12/10/2007.

21. **As to claim 12**, Howard discloses the second recording medium is a RAM ([0039], lines 7-9).

The combination of Howard, Nakashima, and Otsuka do not disclose said second medium has power supplied by a power source that is independent from a power source of the first recording medium.

However, Yoo discloses said second medium has power supplied by a power source that is independent from a power source of the first recording medium (Abstract lines 12-17 and [0032], lines 1-3 disclose how OS software can be reinstalled due to damage or critical error. In this installation process, the extended RAM uses an auxiliary power supply.).

22. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Howard, Nakashima, and Otsuka by, utilizing an auxiliary

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power supply for a particular storage medium as taught by Yoo, for the benefit of preserving pertinent information when power is disrupted.

Response to Arguments

23. Applicant's arguments with respect to claims 3-12, 16, and 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL YAARY whose telephone number is (571)270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. Y./

Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./

Supervisory Patent Examiner, Art Unit 2193